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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,379	04/06/2005	Guofu Zhou	NL 021000	4907
24737 7590 04/16/2008 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER CHOWDHURY, AFROZA Y				
ART UNIT		PAPER NUMBER		
2629				
MAIL DATE		DELIVERY MODE		
04/16/2008		PAPER		

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/530,379  
Filing Date: April 06, 2005  
Appellant(s): ZHOU ET AL.

Robert M. McDermott  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 3/7/2008 appealing from the Office action mailed 10/5/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2002/0180687

Webber

4-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**controller**” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification as originally filed does not provide support for the recitation of claim 13, lines 2-4, **"a controller that is configure to: recite the first picture value**

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**a first picture and a second picture values of a subsequent picture, and determine inter-picture values based on at least the second picture values.”** The specification as first filed doesn't teach one skill in the art how to make or use “a controller that is configure to receive first picture... and determine inter-picture...”

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by **Webber** (US Pub. 2002/0180687).

As to claim 1, Webber discloses an electrophoretic display panel for displaying a picture and a subsequent picture comprising:

a first substrate (fig. 1A-3A(114)) and a second opposed substrate (fig. 1A-3A,

Note; It is inherent for an electropheretic display to have two substrates opposed to each other);

an electrophoretic medium between the substrates (fig. 1A-3A(102), page 3, [0036]);

a plurality of pixels (page 3, [0036], Note: It is inherent for the display to have a plurality of pixels);

a first electrode (fig. 1A-3A(110), front electrode) and a second electrode (fig. 1A(112), rear electrode) associated with each pixel for receiving a potential difference (page 3, [0036]); and

the electrophoretic medium (fig. 1A-3A, 1B-3B, page 3, [0036]) being able to provide each pixel with an appearance, being one of a first (fig. 9, page 4, [0039], white) and a second (fig. 9, page 4, [0039], black) extreme appearance and intermediate appearances (fig. 9, page 9, [0089], gray) between the first and the second extreme appearance, and

each pixel is provided with a potential difference to a picture value that provides the pixels with a respective picture appearance being one of the appearances (fig. 9, white or black) in dependence of the picture to be displayed (page 4, [0039] – [0040]),

subsequently to an inter-picture value (page 6, [0052]) that provides the pixels with a respective inter-picture appearance (fig. 9, page 4, [0040]),

and subsequently to a subsequent picture value (page 6, [0052]) that provides the pixels with a respective subsequent picture appearance being one of the appearances (fig. 9, page 4, [0039] – [0040], white or black) in dependence of the subsequent picture to be displayed,

wherein each pixel is provided with an estimate potential difference as an inter-picture value (page 6, [0052]) that provides the pixels with a respective estimate picture appearance as the inter-picture appearance (fig. 9, page 4, [0039] – [0040]).

As to claim 2, Webber teaches a display panel wherein the respective estimate picture appearance is substantially equal to one of the extreme appearances associated with the subsequent picture appearance (fig. 9, page 4, [0039] – [0040], white or black).

As to claim 3, Webber teaches a display panel wherein the estimate picture appearance of each pixel is substantially equal to: the first extreme appearance (fig. 9, page 4, [0039], white) if the respective subsequent picture appearance is optically closer to the first extreme appearance than to the second extreme appearance (fig. 9, page 4, [0039], black), and the second extreme appearance otherwise.

As to claim 4, Webber discloses a display panel wherein the driver (page 4, [0039]) is further able to control for each pixel the potential difference for displaying the subsequent picture to have a sequence of preset values (page 6, [0052]),

the preset values in the sequence alternating in sign and having an absolute value in the order of the subsequent picture value (page 6, [0052]),

and to apply each preset value in the sequence for a duration being at least a factor of two smaller than a largest duration of the durations during which the



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subsequent picture values will be applied, before having the subsequent picture value (page 6, [0052]).

As to claim 5, Webber teaches a display panel wherein the sequence of preset values has a last preset value with equal sign as a sign of the subsequent picture value (page 4, [0039]).

As to claims 6 and 13, a method of driving an electrostatic display panel, comprising:

receiving first picture values of a first picture and second picture values of a subsequent picture (page 4, [0039]),

determining inter-picture values based on at least the second picture values (page 4, [0040]), and

applying a sequence of potential differences across electrodes of pixels of the electrophoretic display, the sequence including:

potential differences corresponding to the first picture values.

potential differences corresponding to the inter-picture values, and

potential differences corresponding to the second picture values (page 4, [0039] – [0040]).

It is inherent for a display device to have a driver that controls each pixel to a picture value that provides the pixel with a respective picture appearance.

As to claims 7 and 14, a method wherein the inter-picture values are each subsequently equal to one of a set of extreme image values (fig. 9, page 4, [0039] – [0040]).

As to claims 8 and 15, a method wherein the set of extreme image values includes black and white (page 9, [0089]).

As to claims 9 and 16, a method where determining each inter-picture value includes selecting the extreme image value that is closest in value to a corresponding second picture value (fig. 9, page 4, [0039] – [0040]).

As to claims 10 and 17, a method including applying a sequence of preset values of alternating signs (page 4, [0052]).

As to claims 11 and 18, a method wherein a duration of each preset value is at least a factor of two smaller than a largest duration during which the second picture values will be applied (page 6, [0052]).

As to claims 12 and 19, a method wherein the sign of each last applied preset value is equal to a sign of the corresponding second picture value (page 4, [0039]).

**(10) Response to Argument**

**Claims 13-19 stand rejected under 35 U.S.C. 112, first paragraph**

On page 7, 3<sup>rd</sup> paragraph of the Brief, Appellant assert that recitation of claim 13 **"controller that is configured to: receive first picture values of a first picture and second picture values of a subsequent picture, and determine inter-picture values based on at least the second picture values"** are disclosed in the specification as originally filed, at page 4, lines 9-18 and page 4, line 21 through page 5, line 16."

The Examiner respectfully disagrees with Appellant's statements. On page 4, lines 9-18 and page 4, line 21 through page 5, line 16, the specification as originally filed states as follows:

*"The driver means 100 are able to control for each pixel 2 the potential difference to have a picture value to provide the pixels 2 with a respective picture appearance, subsequently to have an inter-picture value to provide the pixel 2 with a respective inter-picture the driver means 100 are able to control for each pixel 2 an estimate potential difference as the inter-picture value to provide the pixel 2 with a respective estimate difference appearance as the inter-picture appearance..."*

Thus, the specification as originally filed does not describe **"a controller that configured to: receive first picture value of a first picture and second picture value of a subsequent picture"** as recited in claim 13.

First, the driver 100 is not the same as a controller. A driver is which drives the display and a controller is which controls the display. Therefore, a driver and a controller is not the same.

Second, no where in specification as first filed states that **“a controller receives a first and a second picture values”**.

Therefore, the specification does not provide support for the recitation of claim 13, in which the appellant is claiming his invention.

**Claims 1-19 stand rejected under 35 U.S.C. 102(e) over Webber**

On page 8, 4<sup>th</sup> paragraph of the Brief, Appellant argues that **Webber fails to teach an electrophoretic display panel that includes a driver that is configured to control, for each pixel, an estimate potential difference of a pair of electrodes as the inter-picture value that provides the pixels with a respective estimate picture appearance as the inter-picture appearance ... .”**

The Examiner again strongly disagrees with the Appellant's assertions. It is inherent for Webber's display to have a driver in order to drive the display into a white and black color display.

Furthermore, Webber discloses an electrophoretic display where the front electrode 110 is **positively charged** relative to the rear electrode 112 in order to **display white color** and the front electrode 110 is **negatively charged** relative to the

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rear electrode 112 in order to **display black color** (figs. 1,2,3 (A,B),(+ potential) and (- potential), 9, page 4, [0039], [0043]). The potential difference between the two electrodes as the inter-picture value provides the pixels with a respective estimate picture appearance as the inter-picture appearance (White color and the black color) (figs. 1A,B 2A,B, 3A,B 9, page 4, [0039], [0042]). Therefore, Webber clearly teaches Appellants' claimed invention.

#### **As to claims 2-5**

On page 10, 2<sup>nd</sup> paragraph of the Brief, Appellant argues, "**Webber fails to teach the display panel ... wherein the respective estimate picture appearance is substantially equal to one of the extreme appearances associated with the subsequent picture appearance... .**"

The Examiner respectfully disagrees with this assertion. Webber clearly teaches a display panel where the respective estimate picture appearance is substantially equal to one of the extreme appearances (i.e. white or black) associated with the subsequent picture appearance. (See above explanation and figs. 1A, 2A, 9, page 4, [0039], [0042] – [0043]).

#### **As to claims 6-9**

On page 11, 1<sup>st</sup> paragraph of the Brief, Appellant argues that **Webber fails to teach determining inter-picture values based on at least second picture values,**

**and fails to teach applying a sequence of potential differences across electrodes of pixels that includes potential differences corresponding to the inter-picture values, and potential differences corresponding to the second picture values... .”**

The Examiner again respectfully disagrees with Appellant's assertion. Webber discloses a method of determining inter-picture values based on at least second picture values. The “inter-picture value” is determined based on the difference between two electrodes in respect to one of the picture values (white or black) (figs. 1A, 2A, 9, page 4, [0039], [0042] – [0043]). It is inherent for a display device for applying a sequence of potential differences across electrodes of pixels that includes potential differences corresponding to the inter-picture values and potential differences corresponding to the second picture values in order to display images. Thus, Webber clearly teaches Applicants' claimed invention.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Afroza Y Chowdhury/

Examiner, Art Unit 2629

Conferees:

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1) Bipin Shalwala

2) Amare Mengistu

/Amare Mengistu/  
Supervisory Patent Examiner, Art Unit 2629

/Bipin Shalwala/  
Supervisory Patent Examiner, Art Unit 2629